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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/008,531	01/16/1998	HOWARD E. RHODES	MIO012V2	6336

7590

04/26/2002

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EXAMINER

TRINH, MICHAEL MANH

ART UNIT

PAPER NUMBER

2822

DATE MAILED: 04/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/008,531

Applicant(s)

RHODES, HOWARD E.

Examiner

Michael M Trinh

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 30 days ~~SIX (6) MONTHS~~ FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-32,35,36,40-43 and 48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 21-32,35,36,40-43 and 48 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

*** This office action is in response to Applicant's response filed on September 27, 2001.

Claims 21-32,35-36,40-43,48 are currently pending.

*** After consideration of Applicant's separate remarks and individual analyses of the claims, it is noted this application contains claims directed to the following patentable distinct species of the claimed invention. Accordingly, restriction of the following inventions is required.

Election/Restriction

I. Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 21-25,31-32, drawn to a method of making a semiconductor device, which method including forming a layer of conductive material having a topology including a substantially vertical component, and forming a contact in the contact hole to contact the vertical component, wherein vertical component is a spacer, wherein the conductive layer is a capacitor electrode, classified in 438/238.

II. Claims 26-30,35-36, drawn to a method of making a semiconductor device having an improved contact to a conductive layer, which method including forming a layer of conductive material along the surfaces of the sidewalls of the openings to form a localized thick region, and forming a contact hole by etching the overlayer and an overetch amount of the conductive layer, wherein the overetch amount is an amount necessary to account for variations in the thickness of the overlayer in forming the first layer of material and the conductive layer, classified in Class 438, subclass 620.

III. Claims 40-43, drawn to a method of making a semiconductor device, which method including forming a conductive layer having a thick region, and forming a contact in the overlayer and in the thick region and physically in contact with the thick region, wherein the thick region having a width greater than other portions of the conductive layer, classified in Class 438, subclass 622.

IV. Claim 48, drawn to a method of making a semiconductor device, which method including forming a thick region of a conductive layer having a second thickness greater than a first thickness formed over an underlayer, and forming a contact in the overlayer and in an overetch amount of the thick region, wherein the overetch amount has a thickness greater than the first thickness, classified in Class 438, subclass 634.

Currently, there is no generic claim. Group I invention to Group IV invention are species and distinct, each from the other, because the method of Group I invention draws to form a layer

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of conductive material having a topology including a substantially vertical component, and a contact to contact the vertical component of a spacer; while Group II invention differently draws to form a conductive layer having a localized thick region, wherein the overetch amount is an amount necessary to account for variations in the thickness of the overlayer in forming the first layer of material and the conductive layer; while Group III invention differently draws to form a contact in the overlayer and in the thick region and physically in contact with the thick region, wherein the thick region having a width greater than other portions of the conductive layer; while Group IV invention differently draws to form a thick region of a conductive layer having a second thickness greater than a first thickness formed over an underlayer, and to form a contact in the overlayer and in an overetch amount of the thick region, wherein the overetch amount has a thickness greater than the first thickness.

Because these inventions are species and distinct for the reasons given above and have acquired a separate status as shown by the above different classifications and as given in the above examples, the fields of search are not co-extensive and separate examination would be required, restriction for examination purposes as indicated is proper.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

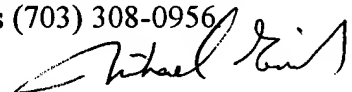
Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Trinh whose telephone number is (703) 308-2554. The examiner can normally be reached on Monday through Friday, from 9:00 Am to 5:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Whitehead Jr Carl, can be reached on (703) 308-4940. The fax phone number for this Group is (703) 305-3432 or (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

-Oasc-



Michael Trinh
Primary Examiner